



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

October 3, 2025

Joseph Wolfe  
Regulatory Manager, T&O  
Nufarm Americas Inc.  
11901 S. Austin Ave.  
Alsip, IL 60803

Subject: Label Amendment - Registration Review Mitigation for Abamectin  
Product Name: NUFARM ABAMECTIN 0.15 EC INSECTICIDE  
EPA Registration Number: 228-658  
Case Number: 478900  
Application Dates: November 6, 2020

Dear Joseph Wolfe:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Abamectin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. You must submit one copy of the final printed labeling before you release the product for

shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Caleb Carr by phone at 202-566-0636, or via email at [carr.caleb@epa.gov](mailto:carr.caleb@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Perch', with a long, sweeping horizontal line extending to the right.

Maryam K. Muhammad-Perch, Team Lead  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

ENCLOSURE: Stamped label

## RESTRICTED USE PESTICIDE

TOXIC TO FISH, MAMMALS, AND AQUATIC ORGANISMS

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

ABAMECTIN

GROUP

6

INSECTICIDE

## Nufarm Abamectin 0.15 EC Insecticide

MITICIDE/INSECTICIDE

### ACTIVE INGREDIENT:

Abamectin (CAS No.'s 65195-56-4 and 65195-55-3): ..... 2.0%\*

OTHER INGREDIENTS: ..... 98.0%

TOTAL: ..... 100.0%

\*Contains 0.15 pounds Abamectin per gallon.

### KEEP OUT OF REACH OF CHILDREN

### WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300  
For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 228-658

EPA EST. NO. \_\_\_\_\_

MANUFACTURED FOR  
NUFARM AMERICAS INC.  
150 HARVESTER DRIVE  
BURR RIDGE, IL 60527



NET CONTENTS \_\_\_\_\_ GALS. ( \_\_\_\_\_ Liters)

000228-00658.20250107

**ACCEPTED**

10/03/2025

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 228-658

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
WARNING**

May be fatal if swallowed. Causes substantial but temporary eye injury. Wear protective eyewear (goggles or face shield). **DO NOT** get in eyes, on skin, or on clothing. Harmful if inhaled or absorbed through the skin. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below.

**Applicators and other handlers must wear:**

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, made of barrier laminate or butyl rubber  $\geq$  14 mils
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**FIRST AID**

<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• <b>DO NOT</b> give any liquid to the person.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

**NOTE TO PHYSICIAN**

Early signs of intoxication include dilation of pupils, muscular incoordination, and muscle tremors. Toxicity following accidental ingestion of this product can be minimized by early administration of chemical adsorbents (e.g., activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements.

In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since abamectin is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic abamectin exposure.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** apply when weather conditions favor drift from target areas. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. **DO NOT** apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several weeks to months after application. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of abamectin from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours.

Use of this product may pose a risk to threatened and endangered species of fish, amphibians, crustaceans (including fresh water shrimp), and insects. All use of this product in the state of California should comply with the recommendations of the California Endangered Species Project. Before using this product in California, consult with your county agriculture commissioner to determine use limitations that apply in your area.

**Runoff Prevention:** To protect the environment, **DO NOT** allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

## PHYSICAL OR CHEMICAL HAZARDS

**DO NOT** use or store near heat or open flame.

**ATTENTION:** This product contains chemicals known to the state of California to cause birth defects or other reproductive harm.

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## DIRECTIONS FOR USE

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### RESTRICTED USE PESTICIDE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. **DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. **Exception:** For grape girdling cane turning, and tying in grapes. **DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 days.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, made of barrier laminate or butyl rubber  $\geq$  14 mils
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

**FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR PEST CONTROL, AND/OR ILLEGAL RESIDUES.**

## PRODUCT INFORMATION

When applied following the **Directions for Use** on this label, this product controls listed mites and insects in various crops. Optimum control of target insects requires this product to be mixed with sufficient amounts of water (and horticultural oil or nonionic surfactants, when recommended) to provide a thorough coverage of foliage. Spray volume in gallons will vary with the size and number of trees per acre or with the density of target crop foliage. Optimum insect control is achieved only if the foliage receives a thorough coverage of this product. Calibrate all spray equipment to ensure delivery of sufficient spray solution to thoroughly cover foliage of target crops.

**Horticultural Oils:** When specified on this label, apply this product with horticultural oils (NOT dormant oils) which are approved for use on the target crop. This combination of products will provide residual control and/or improved efficacy. If using concentrations of oils at greater than 2% (v/v), test this rate on small plots for phytotoxicity before using this rate to treat larger plots. To prevent crop injury, observe all precautions and restrictions on the oil label. See precautions under **Phytotoxicity**, below.

**Nonionic Surfactants:** Nonionic surfactants applied in combination with this product can provide better insect control by allowing the spray mixture to distribute evenly on the leaf and enter the leaf cuticle. When using this product in combination with a nonionic surfactant, carefully follow the Directions for Use and Precautions on the nonionic surfactant label and in official spray guides. See precautions under **Phytotoxicity**, below.

**Phytotoxicity:** Although this product has been tested for phytotoxicity and compatibility and is safe to use on a variety of crops and as a tank mix in combination with many commonly used products, it is not possible to test all crop varieties grown under a variety of growing conditions or to test all possible combination of products. Before use, test potential mixtures (pesticides, crop oils, nonionic surfactants, and nutritional additives) with this product to ensure physical compatibility and lack of phytotoxic effects to the target crop.

**New York State Restrictions:** Aerial applications of this product are prohibited in the State of New York.

**DO NOT apply this product through any type of irrigation system.**

### [OPTIONAL TEXT FOR TIP-N-MEASURE CONTAINERS]

Use Directions for Tip-N-Measure Container:

1. Remove the measuring chamber cap and seal over container opening.
2. Replace the cap and securely tighten.
3. Tip the container until the measuring chamber contains the desired amount of product.
4. Return container to its level position.
5. Remove measuring chamber cap and pour product into proper application equipment.
6. Replace the cap and securely tighten.

## SPRAY DRIFT MANAGEMENT

Except as noted below for specific crops, do not apply with ground application equipment within 25 ft., or by aircraft within 150 ft. of lakes, reservoirs, rivers, permanent streams, marshes, potholes, or natural ponds; estuaries or commercial fish farm ponds. **DO NOT** cultivate within 25 ft. of the aquatic area so as to allow growth of a vegetative filter strip.

Risk of exposure to aquatic areas can be reduced by avoiding applications when wind direction is toward aquatic areas. **DO NOT** cultivate within 25 ft. of the aquatic area so as to allow growth of a vegetative filter strip.

Observe the following precautions when using ground application equipment to spray tree crops (almonds, apples, avocado, citrus, plums, prunes, walnuts) or hops in the vicinity of aquatic areas such as lakes, reservoirs, permanent streams, marshes, potholes, natural ponds, estuaries, or commercial fish ponds.

- **DO NOT** apply this product when weather conditions favor drift to aquatic areas
- **DO NOT** apply within 110 ft. upwind of aquatic areas or when wind speed is above 8 mph.
- Spray last 3 rows upwind of aquatic areas using nozzles on one side only, with spray directed away from the aquatic areas.

- Avoid spray going over tops of trees by adjusting or turning off top nozzles. Shut off nozzles on the side away from the grove/orchard when spraying the outside row. Shut off nozzles when turning at ends of row and passing tree gaps in rows.

### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### **Aerial Applications:**

- **DO NOT** release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size according to the most current version of the American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641).
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must not exceed 65% of the wingspan for fixed wing aircraft or 75% of the rotor diameter for helicopters. Otherwise, the boom length must not exceed 75% of the wingspan for fixed wing aircraft or 90% of the rotor diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply during temperature inversions.

#### **Airblast Applications:**

- Sprays must be directed into the canopy.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- User must turn off outward pointing nozzles at the row end and when spraying the outer row.
- **DO NOT** apply during temperature inversions.

#### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size according to the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### **Boomless Ground Applications:**

- Applicators are required to use a medium or coarser droplet size according to the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572) for all applications.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Controlling Droplet Size – Aircraft**

- Adjust Nozzles – Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.



## **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

## **RELEASE HEIGHT – Aircraft**

Higher release heights increase the potential for spray drift.

## **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

## **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

## **WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **Boom-less Ground Applications:**

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### **Handheld Technology Applications:**

- Take precautions to minimize spray drift.

## **RESISTANCE MANAGEMENT**

For resistance management, this product is a Group 6 insecticide. Any weed population may contain or develop plants naturally resistant to this product and other Group 6 insecticides. The resistant biotypes may dominate the weed population if these insecticides are used repeatedly in the same area. Appropriate resistance management strategies should be followed.

To delay insecticide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 6 insecticides within a growing season sequence or among growing seasons with different insecticide groups that control the same weeds.
- Use tank mixtures with insecticides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for insecticide use that includes scouting and uses historical information related to insecticide use and that considers mechanical control methods, cultural (e.g., timing to favor the turf or crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout before and after insecticide application to monitor weed populations for early signs of resistance development. Indicators of possible insecticide resistance include: (1) failure to control a weed species normally controlled by the insecticide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative



insecticide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other areas by cleaning equipment [when moving between fields and planting clean seed].

- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or insecticide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report non-performance or suspected resistance, contact Nufarm at 1-800-345-3330.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. **DO NOT** assume that each listed weed is being controlled by this mechanism of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product.

Suspected insecticide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the insecticide at the dose applied, especially if control is achieved on adjacent weeds.
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

## CROP USE DIRECTIONS

### APPLES

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
European red mites McDaniel spider mites Tentiform leafminers Two-spotted spider mites White apple leafhoppers	Concentrate Sprays: 10-20 fl. oz/A (Dilute Sprays: 2.5-5.0 fl. oz./100 gal)  ADD a horticultural oil for best results	<p>Apply using conventional dilute or concentrate ground equipment.</p> <p>Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.</p> <p><b>Spider Mites:</b> Apply when mites first appear. For best results, apply before 5 spider mites per leaf is observed. Spray deposits of this product plus a horticultural spray oil on new foliage growth provides greater residual control. Apply this product for spider mite control only during petalfall and up to six weeks following petalfall.</p> <p><b>Tentiform Leafminers:</b> For best results, apply to control new hatch (eggs) and early stages of first and second generation leafminers. <b>DO NOT</b> apply during bloom.</p> <p><b>White Apple Leafhopper (Not for use west of the Rocky Mountains):</b> Apply this product only to the first generation soon after petalfall; use in combination with horticultural spray oil.</p> <p>Application without horticultural spray oil may result in reduced efficacy and/or residual control. However, fruit injury to certain apple varieties (on light-skinned varieties such as Golden Delicious) may occur with this combination of this product and spray oil if other products are applied after this spray mix application. Refer to the Directions for Use and Precautions on horticultural spray oil labels.</p>	<p><b>Pre-Harvest Interval</b> – 28 days</p> <p><b>DO NOT</b> exceed 20 fl. oz/A per application or 40 fl. oz/A per growing season.</p> <p><b>DO NOT</b> apply this product to control white apple leafhopper west of the Rocky Mountains.</p> <p><b>DO NOT</b> make more than 2 applications per season.</p> <p><b>DO NOT</b> apply by air.</p> <p>Refer to additional directions on spray oils in the <b>PRODUCT INFORMATION</b> section.</p> <p>See specific restrictions for this crop in the <b>SPRAY DRIFT MANAGEMENT</b> section of this label.</p> <p>To avoid phytotoxicity or loss of crop, do not apply this product plus oil if Captan was applied 14 days before the application or if Captan will be applied 14 days after application.</p> <p><b>DO NOT</b> graze livestock in treated orchards.</p>
Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil)	1 gal./A (minimum) (0.25%, v/v)	If needed, a second application may be made but allow at least 21 days to elapse after the first application.	

NOTE: Concentrate Spray rates (Nufarm Abamectin 0.15 EC Insecticide/A) are determined by selecting the amount needed for a full cover dilute spray. The amount of Nufarm Abamectin 0.15 EC Insecticide/A as a concentrate spray is the same amount as required for dilute sprays to the orchard and could be less than 10 fl oz. Nufarm Abamectin 0.15 EC Insecticide/A for small trees. Rates of Nufarm Abamectin 0.15 EC Insecticide/100 gal are based on 400 gal/A of dilute spray.

## AVOCADOS

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Avocado thrips ( <i>Scirtothrips perseae</i> ) Persea Mites ( <i>Oligonychus perseae</i> )	<p><b>DO NOT</b> use less than 10 fl. oz. of this product per Acre</p> <p>Low to moderate insect infestations: 10.0-15.0 Heavy pest infestations: 15.0-20.0</p> <p>ADD a horticultural oil for best results</p>	<p>Apply using ground equipment in 100 or more gal water/A. If using 400 gal/A or more, apply 2.5 fl. oz. of this product/100 gal of water <b>and</b> 1.0-4.0% of NR (narrow range) 415 oil.</p> <p>Although aerial applications are permitted when this product is applied in 50 or more gal water/A, better control of target insects is obtained using ground applications. Users accept all liability for level and duration of thrip control from aerial applications of this product.</p> <p>Apply this product when thrips first appear but prior to finding 5 immature thrips per leaf or fruit. For low to moderate infestations, include 1.0-4.0% of NR 415 oil in combination with this product and the horticultural spray oil approved for use on avocados.</p> <p>If needed, a second application may be made but allow at least 30 days to elapse after the first application.</p>	<p><b>Pre-Harvest Interval</b> – 14 days</p> <p><b>DO NOT</b> make more than 2 applications per season.</p> <p><b>DO NOT</b> exceed 20 fl. oz/A per application or more than 40 fl. oz./A per season.</p> <p><b>DO NOT</b> allow livestock to graze in treated orchards.</p> <p>Refer to additional directions on spray oils in the <b>PRODUCT INFORMATION</b> section.</p>
Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil)	Minimum 1 to 4%, v/v (minimum)		
<p>NOTE:</p> <ul style="list-style-type: none"><li>• Low infestations are defined as 1-2 immature thrips per leaf/fruit</li><li>• Moderate infestations are defined as 2-4 thrips per leaf/fruit;</li><li>• Heavy/severe infestations are defined as more than 5 thrips per leaf/fruit.</li></ul> <p>NOTE: To prevent crop injury, observe all precautions and restrictions on the oil label. When using oil concentrations above 2.0%, treat a small test area before making a large-scale application.</p>			

**CELERIAC (*Apium graveollens*)**

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Two-spotted spider mites	16.0	<p>Apply using ground equipment using conventional dilute or concentrate sprayers.</p> <p>Apply when mites first appear using sufficient volumes (greater than 20 gal of water per acre) to ensure thorough foliage coverage.</p> <p>If needed, a second application may be made but allow at least 7 days to elapse after the first application.</p> <p>For best results, use in combination with anon-ionic surfactant.</p>	<p><b>Pre-Harvest Interval</b> – 7 days</p> <p>To avoid insect resistance to this product, do not apply more than two sequential applications.</p> <p><b>DO NOT</b> exceed 48 fl. oz/A after transplanting.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p>

## CITRUS FRUIT CROP (CROP GROUP 10)

Some of the crops in this group include calamondin, citrus citron, citrus hybrids (includes chironja, tangelo, tangor), grapefruit, kumquat, lemon, lime, mandarin (tangerine), pummelo, Satsuma mandarin, sour orange, and sweet orange.

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
Broad mites Citrus bud mites Two-spotted spider mites	Concentrate Sprays: 10-20 fl. oz/A (Dilute Sprays: 1.0-2.0 fl. oz./100 gal)	Apply using conventional dilute or concentrate ground equipment.  Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.	<b>Pre-Harvest Interval</b> – 7 days  To avoid insect resistance to this product, do not apply to citrus grown in nurseries.
Citrus rust mites	Concentrate Sprays: 5-20 fl. oz/A (Dilute Sprays: 0.5-2.0 fl. oz./100 gal)	ADD a horticultural oil for best results  <b>Asian citrus psylla:</b> Apply to protect newly expanding foliage flush during the spring, summer or fall. Reaper 0.1 5 EC will only control adults and nymphs present at the time of application.  <b>Mites:</b> Apply when mites first appear during spring, summer, and/or fall.	<b>DO NOT</b> apply this product, or any other abamectin containing product within 30 days of the last treatment.
Citrus leafminers	Concentrate Sprays: 5-20 fl. oz/A (Dilute Sprays: NR)	<b>Citrus bud mite:</b> For best results, time the spray at "bud swell".  <b>Citrus leafminer:</b> Apply to protect new growth during spring, summer, or fall.  <b>Citrus thrips:</b> Application targeted for citrus thrips will only control the current generation and must be correctly timed. Apply when economic thresholds have been reached (after egg hatch has begun - preferably early to mid-hatch).	<b>DO NOT</b> exceed 40 fl. oz/A (0.047 lb. a.i./A) of this product, or any other abamectin containing product per growing season.
Asian citrus psyllids Citrus thrips	Concentrate Sprays: 10-20 fl. oz/A (Dilute Sprays: NR)	For <b>Asian citrus psylla</b> , <b>broad mites</b> , <b>citrus leafminers</b> and <b>citrus rust mites</b> optimum results are achieved if spray applications are made at 150-300 gals. Spray mixture/A plus a minimum of 3 gal./A of horticultural oil. Apply with a ground speed of 1 to 1.5 mph.  To control <b>citrus leafminer</b> -Ground or aerial application is permitted: however, do not apply with aircraft to citrus in California. For Aerial application use a minimum of 10 gallons of finished spray volume per acre. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.	<b>DO NOT</b> make more than 3 applications of this product, or any other abamectin containing product per growing season.
Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil)	1 gal./A (minimum) (0.20%, v/v); see specific rates for certain pests under Application Instructions and Timing	To manage resistance, if pest infestation requires additional treatments, use other alternate insecticides with different modes of action which are labeled for use on these pests and crops.	<b>DO NOT</b> allow livestock to graze in treated orchards.  Refer to additional directions on spray oils in the <b>PRODUCT INFORMATION</b> section.  See specific restrictions for this crop in the <b>SPRAY DRIFT MANAGEMENT</b> section of this label.

NR = Not recommended.

NOTE: Concentrate Spray rates (Nufarm Abamectin 0.15 EC Insecticide /A) are adjusted to apply the amount/A equal to that used in full cover dilute spray. The amount of Nufarm Abamectin 0.15 EC Insecticide/A as a concentrate spray is the same amount as required for dilute sprays to the orchard and could be less than 10 fl oz. Nufarm Abamectin 0.15 EC Insecticide/A for small trees. Rates of Nufarm Abamectin 0.15 EC Insecticide/100 gal are based on 1,000 gal/A of dilute spray.

## COTTON

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Carmine spider mites Pacific spider mites Strawberry spider mites Two-spotted spider mites	Early season: 4.0-6.0	<p>Apply this product when mites first appear.</p> <p>Rate will depend on the cotton plant size and thickness of foliage. Use the 4-6 fl. oz./A rate only early in season and for cotton plants 10 inches or less in height.</p> <p>Applications can be made by air or ground using a minimum of 5 gallons of water/A.</p> <p>West of the Rockies: <b>DO NOT</b> apply less than 4 fl. oz./A and can only be applied by ground equipment.</p>	<p><b>DO NOT</b> apply more than 16 fl. oz/A per application.</p> <p><b>DO NOT</b> make more than 2 applications per season with a 21-day interval between applications.</p> <p><b>DO NOT</b> exceed 32 fl. oz/A per growing season.</p> <p><b>Pre-Harvest Interval</b> – 20 days</p> <p><b>DO NOT</b> graze livestock in treated fields or feed cotton foliage to livestock.</p>
	Mid-season/Lay-by: 8.0-16.0	<p>Apply this product when mites first appear.</p> <p>Rate will depend on the cotton plant size and thickness of foliage.</p> <p>Applications can be made by air or ground using a minimum of 5 gallons of water/A.</p>	

### CUCURBIT VEGETABLE CROP GROUP (CROP GROUP 9)

Some of the crops in this group include chayote, Chinese waxgourd, citron melon, cucumbers, gherkin, edible gourds (includes hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp., (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); muskmelon, (hybrids and/or cultivars of *Cucumis melo* includes true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon and snake melon), pumpkin, summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash, (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Leafminers Spider mites	<p>Low to moderate pest infestations: 8.0-12.0</p> <p>Heavy pest infestations: 16.0</p>	<p>Use ground equipment in 20 or more gal water/A. Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications. Users accept all liability for level and duration of mite control from aerial applications of this product.</p> <p>Apply when insects first appear. Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.</p> <p>If needed, a second application may be made but allow at least 7 days to elapse after the first application.</p>	<p><b>Pre-Harvest Interval</b> – 7 days</p> <p><b>DO NOT</b> exceed 48 fl. oz/A per growing season.</p> <p><b>DO NOT</b> make more than 2 sequential applications per season.</p> <p><b>DO NOT</b> apply by air in the State of New York.</p>



## DRY BEAN

Some of the crops in this group include *Cicer arietinum* (chickpea, garbanzo bean), *Lupinus* spp. (including sweet lupine, white sweet lupine, white lupine, and grain lupine), *Phaseolus* spp. (including kidney bean, lima bean, mung bean, navy bean, pinto bean, snap bean, and waxbean), *Vicia faba* (broad bean, fava bean), and *Vigna* spp. (including adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea\*, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, and yardlong bean).

\* For use on cowpeas that are grown only for dry seed. Do not allow livestock to graze cowpea forage and do not harvest cowpea forage or hay for use as livestock feed.

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
<i>Liriomyza</i> leafminers Spider mites	Low to moderate pest infestations: 8.0-12.0  Heavy pest infestations: 13.0-16.0	Do not apply in less than 10 gal. of water/A with ground application equipment. Do not apply in less than 5 gal. of water/A with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures), use a greater volume of water to ensure adequate coverage.  <b>Leafminers and Spider mites:</b> Apply when adult leafminers or spider mites first appear, and repeat as needed to maintain control within constraints of a sound resistance management program.  If needed, a second application may be made but allow at least 6 days to elapse after the first application.	<b>Pre-Harvest Interval</b> – 7 days  <b>DO NOT</b> exceed 16 fl. oz/A per application.  <b>DO NOT</b> exceed 48 fl. oz/A per growing season.  <b>DO NOT</b> make more than 2 sequential applications.  Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.  <b>DO NOT</b> apply by air in the State of New York.

## FRUITING VEGETABLES CROP GROUP (CROP GROUP 8)

Some of the crops in this group include eggplant, groundcherry, pepino, peppers (including bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); tomatillo and tomato.

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Broad mites Colorado potato beetles <i>Liriomyza</i> leafminers Potato psyllids Spider mites Thrips palmi Tomato psyllids Tomato Russet mites	Low to moderate pest infestations: 8.0-12.0  Heavy pest infestations: 16.0  ADD a nonionic surfactant for best results	<p>Use ground equipment in 20 or more gal water/A. Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications. Users accept all liability for level and duration of mite control from aerial applications of this product.</p> <p>Apply when insects first appear. Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.</p> <p>If needed, a second application may be made but allow at least 7 days to elapse after the first application.</p> <p>A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray.</p> <p><b>Mites:</b> For best control apply with ground equipment.</p> <p><b>Broad, russet, and spider mites:</b> Apply when mites first appear.</p> <p><b>Thrips palmi:</b> Apply when thrips are first observed.</p> <p><b>Leafminers:</b> Apply when adult flies are first observed</p> <p><b>Potato Psyllids:</b> Sequential application 10-14 days apart may be needed for infestations with heavy egg and nymph populations.</p> <p><b>Potato Psyllids:</b> Sequential application 10-14 days apart may be needed for infestations with heavy egg and nymph populations.</p>	<p><b>Pre-Harvest Interval – 7 days</b></p> <p>To avoid insect resistance to this product, do not apply to vegetables grown for transplant.</p> <p><b>DO NOT</b> exceed 48 fl. oz/A per growing season.</p> <p><b>DO NOT</b> make more than 2 sequential applications.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p> <p><b>DO NOT</b> apply by air in the State of New York.</p> <p>For resistance management, <b>DO NOT</b> use on fruiting vegetables grown for transplanting.</p>
Tomato pinworms	16.0	<p><b>Tomato pinworm:</b> Application may be made from the time moth activity is detected up to, but no later than, the time when newly emerged larvae are present.</p>	

## GRAPES

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
<p>Pacific spider mites</p> <p>Two-spotted spider mites</p> <p>Variegated leafhoppers*</p> <p>Western grapeleaf skeletonizers</p> <p>Western grape leafhoppers*</p> <p>Willamette spider mites</p> <p><b>*Note:</b> This product only provides Knock-down control of pest.</p>	<p>Low to moderate pest infestations: 8.0-12.0</p> <p>Heavy pest infestations: 16.0</p> <p>ADD a nonionic surfactant for best results</p>	<p>Use conventional ground application equipment in 50 gal or more of water/A to ensure thorough foliage coverage, or with electrostatic spray equipment in 5 gal or more of water/A.</p> <p><b>Spider mites:</b> Apply when mites first appear (or before more than 5 motiles per leaf are observed).</p> <p><b>Western grapeleaf skeletonizer:</b> Apply with a non-ionic surfactant when the larvae are initially seen. For best results, apply shortly after eggs hatch.</p> <p><b>Leafhoppers:</b> For contact knock-down control of these pests, apply with a non-ionic surfactant when pest first appears.</p> <p><b>European Grapevine Moth:</b> Apply to aid in control of first generation of pest on grapes.</p> <p>Maximum coverage is required to control these pests, and this product must be applied to both sides of the rows. <b>DO NOT</b> spray alternate rows.</p> <p>If needed, a second application may be made but allow at least 21 days to elapse after the first application.</p> <p>A non-ionic (not binder or sticker-type) surfactant must be used in combination with this product to provide improved wetting of foliage and an even deposition of the spray.</p>	<p><b>DO NOT</b> enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.</p> <p><b>Exception:</b> For grape girdling cane turning, and tying in grapes. <b>DO NOT</b> enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 days.</p> <p><b>Pre-Harvest Interval</b> – 28 days</p> <p><b>DO NOT</b> exceed 16 fl. oz/A per application or 32 fl. oz/A per growing season.</p> <p><b>DO NOT</b> make more than 2 applications per season.</p> <p><b>DO NOT</b> graze livestock in treated vineyards.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p> <p><b>DO NOT</b> apply by air.</p>
European Grapevine Moth ( <i>Lobesia botrana</i> )	10-16	It is impossible to test the safety of this product plus non-ionic surfactants on all grape varieties under the various conditions which lead to phytotoxicity. Therefore carefully follow the directions for use on the nonionic surfactant label.	

## HERB CROP SUBGROUP (CROP SUBGROUP 19A)

Some of the crops in this group include angelica, balm, basil, borage, burnet, camomile (or chamomile), catnip, chervil (dried), chives, chives (Chinese), cilantro (leaf), clary, coriander (leaf), costmary, culantro (leaf), curry (leaf), dill weed, horehound, hyssop, lavender, lemongrass, lovage (leaf), marigold, marjoram (*Origanum* species), nasturtium, parsley (dried), pennyroyal, rosemary, rue, sage, summer and winter savory, sweet bay, tansy, tarragon, thyme, wintergreen, woodruff, and wormwood.

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
<i>Liriomyza</i> leafminers Spider mites	Low to moderate pest infestations: 8.0  Heavy pest infestations: 16.0  ADD a nonionic surfactant for best results	Apply using ground equipment using conventional dilute or concentrate sprayers.  Apply when adult leafminer flies first appear using sufficient volumes (greater than 30 gal of water per acre) to ensure thorough foliage coverage.  If needed, a second application may be made but allow at least 7 days to elapse after the first application.  A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.	<b>Pre-Harvest Interval for listed herbs except chive</b> – 14 days. <b>Pre-Harvest Interval for chives</b> - 7 days. <b>DO NOT</b> apply more than 6 applications of 8 fl. oz. of this product/A or 3 applications of 16 fl. oz. of this product/A per cropping season. <b>DO NOT</b> make more than 2 applications per single cutting (harvest). <b>DO NOT</b> apply by air. Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section. <b>DO NOT</b> graze livestock in treated fields or feed treated foliage to livestock.

## HOPS (EXCLUDING CALIFORNIA)

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Two-spotted spider mites	<p>8.0 (minimum)-16.0</p> <p>ADD a nonionic surfactant for best results</p>	<p>Use conventional ground application as dilute or concentrate sprays. Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage. If trellis height is 6-8 feet, use 40 gal of water/A at the 8-16 fl. oz/A rate; if height is greater than 6-8 feet, use 100 gal/A at the 16 fl. oz/A rate.</p> <p>Note that while concentrate sprays <b>DO NOT</b> require as much water, the amount of this product/A should be the same as for dilute sprays.</p> <p>Apply when mites first appear. If needed, a second application may be made but allow at least 21 days to elapse after the first application and repeat application only after using an alternative miticide with a different mode of action.</p> <p>A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.</p>	<p><b>Pre-Harvest Interval</b> – 28 days</p> <p><b>DO NOT</b> exceed 16 fl. oz/A per application or 32 fl. oz/A per growing season.</p> <p><b>DO NOT</b> apply by air.</p> <p><b>DO NOT</b> apply more than 2 applications per growing season.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p> <p><b>DO NOT</b> graze livestock in treated hop yards.</p>

# LEAFY VEGETABLE (Except Brassica Vegetables) CROP GROUP (CROP GROUP 4)

Some of the crops in this group include amaranth (leafy amaranth, Chinese spinach, tampala), arugula (roquette), cardoon, celery, celtuce, chervil, Chinese celery, chrysanthemum (edible leaved and garland), corn salad, cress (garden and upland (yellow rocket and winter cress)), dandelion, dock (sorrel), endive (escarole), fennel, Florence fennel, lettuce (head and leaf), New Zealand spinach, orach, parsley, purslane (garden and winter), radicchio (red chicory), rhubarb, spinach, Swiss chard and vine spinach.

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Carmine spider mites <i>Liriomyza</i> leafminers Two-spotted spider mites	Low to moderate pest infestations: 8.0-12.0  Heavy pest infestations: 16.0  ADD a nonionic surfactant for best results	<p>Apply this product when mites or adult leafminer flies are observed and use ground equipment in 20 or more gal water/A. Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications. Users accept all liability for level and duration of insect control from aerial applications of this product.</p> <p><b>Spider mites:</b> Apply when mites first appear, and repeat as needed to maintain control.</p> <p><b>Leafminers:</b> Apply when adult flies are first observed and repeat applications as needed to maintain control.</p> <p>Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.</p> <p>If needed, a second application may be made but allow at least 7 days to elapse after the first application.</p> <p>A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.</p>	<p><b>Pre-Harvest Interval</b> – 7 days</p> <p><b>DO NOT</b> exceed 48 fl. oz/A per growing season.</p> <p>To avoid insect resistance to this product, do not apply to vegetables grown for transplants.</p> <p><b>DO NOT</b> make more than 2 sequential applications.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p> <p><b>DO NOT</b> apply by air in the State of New York.</p>

## MINT (PEPPERMINT AND SPEARMINT)

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Two-spotted spider mites	8.0-12.0  ADD a nonionic surfactant for best results	<p>Apply this product when mites first appear and use ground equipment in 20 or more gal water/A. Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications. Users accept all liability for level and duration of insect control from aerial applications of this product.</p> <p>Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.</p> <p>If needed, a second application may be made but allow at least 7 days to elapse after the first application.</p> <p>A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.</p>	<p><b>Pre-Harvest Interval</b> – 28 days</p> <p><b>DO NOT</b> exceed 12 fl. oz./A per application or 36 fl. oz/A per growing season.</p> <p><b>DO NOT</b> make more than 2 sequential applications.</p> <p><b>DO NOT</b> apply by air in the State of New York.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p> <p><b>DO NOT</b> graze livestock in treated fields or feed treated foliage to livestock.</p>



### ONION, BULB (CROP SUBGROUP 3-07A)

Some of the crops in this group are bulb onion, including bulb Chinese, bulb daylily, bulb fritillaria, bulb garlic, bulb great-headed garlic, bulb lily, bulb onion, pearl onion, potato onion, bulb serpent garlic, bulb shallot, cultivars, varieties, and/or hybrids of bulb onion, subgroup 3-07A.

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
<i>Liriomyza</i> leafminers Thrips	Low to moderate pest infestations: 8.0-12.0  Heavy pest infestations: 13.0-16.0	<p>Do not apply in less than 20 gal. of water/A with ground application equipment. Do not apply in less than 5 gal. of water/A with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures), use a greater volume of water to ensure adequate coverage.</p> <p><b>Leafminers:</b> Apply when adult leafminers first appear, and repeat as needed to maintain control within constraints of a sound resistance management program.</p> <p><b>Thrips:</b> Apply in a thrips management program and when thrips are at economic threshold. Repeat application, as needed, to maintain control within constraints of a sound resistance management program. Do not use this product as a rescue treatment for trips control.</p> <p>If needed, a second application may be made but allow at least 7 days to elapse after the first application.</p> <p>Make 2 consecutive applications o then rotate to a chemistry with a different mode of action. Make at least 2 applications of a chemistry with a different mode of action before making additional applications of this product.</p>	<p><b>Pre-Harvest Interval</b> – 30 days</p> <p><b>DO NOT</b> exceed 16 fl. oz/A per application.</p> <p><b>DO NOT</b> exceed 48 fl. oz/A per growing season.</p> <p><b>DO NOT</b> make more than 2 sequential applications.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p> <p><b>DO NOT</b> apply by air in the State of New York.</p>
<p>Note: Add a non-ionic activator type wetting, spreading and/or penetrating adjuvant approved for use on bulb onion. Do not use binder sticker type adjuvants. Tank mixing with products that have binder sticker type formulations can reduce performance of this product.</p>			

## PEARS (INCLUDING ORIENTAL PEAR TREES)

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
European red mites McDaniel spider mites Pear rust mites Pear psyllas Two-spotted spider mites Yellow mites	Concentrate Sprays: 10-20 fl. oz/A  (Dilute Sprays: 2.5-5.0 fl. oz./100 gal)  ADD a horticultural oil for best results	Apply using conventional dilute or concentrate ground equipment.  Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.  If needed, a second application may be made but allow at least 21 days to elapse after the first application.	<b>Pre-Harvest Interval</b> – 28 days  <b>DO NOT</b> exceed 20 fl. oz/A per application or 40 fl. oz/A per growing season.  <b>DO NOT</b> make more than 2 applications per season.  <b>DO NOT</b> apply by air.  See specific restrictions for this crop in the <b>SPRAY DRIFT MANAGEMENT</b> section of this label.  Refer to additional directions on spray oils in the <b>PRODUCT INFORMATION</b> section.
Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil)	1 gal/A, minimum (0.25%, v/v)		To avoid phytotoxicity or loss of crop, do not apply this product plus oil if Captan was applied 14 days before the application or if Captan will be applied 14 days after application.  <b>DO NOT</b> graze livestock in treated orchards.
NOTE: Concentrate Spray rates (Nufarm Abamectin 0.15 EC Insecticide/A) are determined by selecting the amount needed for a full cover dilute spray. The amount of Nufarm Abamectin 0.15 EC Insecticide/A as a concentrate spray is the same amount as required for dilute sprays to the orchard and could be less than 10 fl oz. Nufarm Abamectin 0.15 EC Insecticide/A for small trees. Rates of Nufarm Abamectin 0.15 EC Insecticide/100 gal are based on 400 gal/A of dilute spray.			

## STONE FRUIT CROP GROUP (CROP GROUP 12)

Some of the crops in this group include apricot, cherry (sweet and tart), nectarine, peach, plum, plum (chickasaw, damson, and Japanese), plumcot and prune (fresh).

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
European red mites Pacific spider mites Two-spotted spider mites	Concentrate Sprays: 10-20 fl. oz/A (Dilute Sprays: 2.5-5.0 fl. oz./100 gal)  PLUS a horticultural oil or nonionic surfactant (required for optimum insect control)	Apply using conventional dilute or concentrate ground equipment.  Make applications when mites first are seen. Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.  If needed, a second application may be made but allow at least 21 days to elapse after the first application.  Always apply this product in combination with either a nonionic surfactant, or with horticultural spray oil (not a dormant oil), but use caution since oil may cause phytotoxicity to foliage and fruit.	<b>Pre-Harvest Interval</b> – 21 days  <b>DO NOT</b> exceed 20 fl. oz/A per application or 40 fl. oz/A per growing season.  <b>DO NOT</b> make more than 2 applications per season. Refer to additional directions on spray oils and nonionic surfactants in the <b>PRODUCT INFORMATION</b> section. See specific restrictions for this crop in the <b>SPRAY DRIFT MANAGEMENT</b> section of this label.
Horticultural Spray oil (NOT a dormant oil)  <b>OR</b>  Nonionic Surfactant	1 gal/A (minimum) (0.25%, v/v)		<b>DO NOT</b> apply by air.  <b>DO NOT</b> graze livestock in treated orchards.
<p>NOTE: Concentrate Spray rates (Nufarm Abamectin 0.15 EC Insecticide/A) are determined by selecting the amount needed for a full cover dilute spray. The amount of Nufarm Abamectin 0.15 EC Insecticide/A as a concentrate spray is the same amount as required for dilute sprays to the orchard and could be less than 10 fl oz. Nufarm Abamectin 0.15 EC Insecticide/A for small trees. Rates of Nufarm Abamectin 0.15 EC Insecticide/100 gal are based on 400 gal/A of dilute spray.</p> <p>NOTE:</p> <ol style="list-style-type: none"> <li>1) A nonionic surfactant that spreads on and/or penetrates the leaf cuticle can improve insect control. Although Abacus has been tested in combination with non ionic surfactants for safety to stone fruit, it is impossible to test on all stone fruit varieties under the variety of conditions that may cause crop injury. Therefore, when using Abacus in combination with a non-ionic surfactant, carefully follow the <b>Directions for Use</b> and <b>Precautions</b> on the surfactant label and in official spray guides</li> <li>2) A horticultural oil (not a dormant oil) may improve efficacy and may be used but it may increase the possibility of phytotoxicity to foliage and fruit.</li> </ol>			

## STRAWBERRIES

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Aphids Carmine mites Cyclamen mites Strawberry spider mites Thrips Two-spotted spider mites Whiteflies	16.0  ADD a horticultural oil for best results	<p>Apply using conventional ground equipment or electrostatic sprayers.</p> <p>Optimum coverage of the leaves (tops and bottoms) can be achieved by adjusting the spray volumes and placement of the nozzles.</p> <p>Apply when mites first appear using sufficient volumes (greater than 50 gal of water/A for conventional sprayers, greater than 10 gal of water/A for electrostatic sprayers) to ensure thorough foliage coverage.</p> <p>Make a second application at 7-10 day intervals. Repeat the two step application process, if needed, but only 21-days after the second application is made.</p> <p>A non-ionic or silicone-based (not a sticker or binder type) surfactant used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray.</p>	<p><b>Pre-Harvest Interval</b> – 3 days</p> <p>To avoid insect resistance to this product, do not apply to strawberries grown in nurseries.</p> <p><b>DO NOT</b> exceed 16 fl. oz/A per application or more than 64 fl. oz./A per growing season.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p> <p><b>DO NOT</b> apply by air.</p>

### TREE NUTS CROP GROUP (CROP GROUP 14) AND PISTACHIO

Some of the crops in this group include almond, beech nut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert (hazelnut), hickory nut, macadamia nut, pecan, and walnuts (black and English).

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
European red mites Pacific spider mites Strawberry spider mites Two-spotted spider mites	Concentrate Sprays: 10-20 fl. oz/A  (Dilute Sprays: 2.5-5.0 fl. oz./100 gal)  <b>Plus</b>  a horticultural spray oil (required for optimum insect control)	Apply using conventional dilute or concentrate ground equipment.  Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.  Apply this product when spider mites first appear. Greater residual spider mite control is achieved when spray is deposited on new foliage growth.  If needed, a second application may be made but allow at least 21 days to elapse after the first application.  To manage resistance, if pest infestation requires additional treatments, use other alternate insecticides with different modes of action which are labeled for use on these pests and crops.	<b>Pre-Harvest Interval</b> – 21 days  <b>DO NOT</b> exceed 20 fl. oz/A per application or 40 fl. oz/A per growing season.  <b>DO NOT</b> make more than 2 applications per season.  <b>DO NOT</b> apply by air.  Refer to additional directions on spray oils in the <b>PRODUCT INFORMATION</b> section.  See specific restrictions for this crop in the <b>SPRAY DRIFT MANAGEMENT</b> section of this label.  <b>DO NOT</b> graze livestock in treated orchards.
Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil)	1 gal./A (minimum) (0.25%, v/v)		
NOTE: Concentrate Spray rates (Nufarm Abamectin 0.15 EC Insecticide/A) are determined by selecting the amount needed for a full cover dilute spray. The amount of Nufarm Abamectin 0.15 EC Insecticide/A as a concentrate spray is the same amount as required for dilute sprays to the orchard and could be less than 10 fl oz. Nufarm Abamectin 0.15 EC Insecticide/A for small trees. Rates of Nufarm Abamectin 0.15 EC Insecticide/100 gal are based on 400 gal/A of dilute spray.			

## TUBEROUS AND CORM VEGETABLES CROP SUBGROUP (CROP SUBGROUP 1 C)

Some of the crops in this group include arracacha, arrowroot, artichoke, Chinese artichoke, edible canna, Jerusalem artichoke, cassava (bitter and sweet), chayote (root), chufa, dasheen, ginger, leren, potato, sweet potato, taniel, turmeric, yam bean, and yam (true).

Target Insects	Application Rate of Nufarm Abamectin 0.15 EC Insecticide fl. oz./A	Application Instructions and Timing	Restrictions
Colorado potato beetles <i>Liriomyza</i> leafminers Potato psyllids Spider mites	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 16.0  ADD a horticultural oil for best results	<p>Apply using conventional ground or aerial application equipment.</p> <p>Apply when mites and adult leafminer flies first appear. Use sufficient volumes (greater than 20 gal of water/A for ground applications and greater than 5 gal of water/A for aerial applications) to ensure thorough foliage coverage.</p> <p><b>Colorado potato beetle:</b> Begin applications when 50% of the egg masses have hatched or larvae are observed. If a second application is made, ensure it is to control a single Colorado potato beetle generation.</p> <p><b><i>Liriomyza</i> leafminers:</b> Make the first application when adult flies are first observed. Repeat applications as needed to maintain control.</p> <p><b>Spider mites:</b> Make the first application when mites first appear. Repeat application as needed to maintain control.</p> <p>If needed, a second application may be made but allow at least 7 days to elapse after the first application.</p> <p>A non-ionic or silicone-based (not a sticker or binder type) surfactant used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray.</p>	<p><b>Pre-Harvest Interval</b> – 14 days</p> <p><b>DO NOT</b> exceed 32 fl. oz/A per crop season for control of <b>spider mites</b> or <b>Colorado potato beetle</b>.</p> <p><b>DO NOT</b> exceed 48 fl. oz/A per crop season for control of <b>leafminers</b>.</p> <p><b>DO NOT</b> make more than 2 applications to control <b>Colorado potato beetle</b> per crop season.</p> <p><b>DO NOT</b> make more than two sequential applications.</p> <p><b>DO NOT</b> apply by air in the State of New York.</p> <p>Refer to additional directions on nonionic surfactants in the <b>PRODUCT INFORMATION</b> section.</p> <p><b>DO NOT</b> graze or feed treated foliage to livestock.</p>

### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place.

**PESTICIDE DISPOSAL:** Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**SPILLS:** For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-424-9300, day or night.

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